

42199
S/051/62/013/004/020/023
E039/E491

Z.1170
AUTHORS: Neykliar, P.V., Shvarts, V.M., Kharitonova, Z.V.,
 Borin, A.V., Ryskina, S.I., Siletskaya, N.V.

TITLE: Photographic films for spectroscopy and astronomy

PERIODICAL: Optika i spektroskopiya, v.13, no.4, 1962, 607-609

TEXT: Recent work at the Kazanskiy filial Vsesoyuznogo nauchno-issledovatel'skogo kinofotoinstituta (Kazan' Branch of the All-Union Scientific Research Institute on Cinemaphotography) has been aimed at increasing the sensitivities of photographic films for long exposures and of infrachromatic films. Films having greater sensitivity were developed for long exposures in the near ultraviolet region and for different regions of the infrared up to 1050 m μ . Films for the visible region are designated by the letter A (Astronomy) and a number corresponding to the wavelength for which the sensitivity is a half of the maximum and on the long wavelength side. This film is manufactured at the Kazanskiy khimicheskiy zavod (Kazan' Chemical Works). Films for the infrared region are designated by a number corresponding to its maximum sensitivity. Spectral sensitivity

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Photographic films ...

curves of films A-500, A-600, A-650, A-660 and A-700 are given. In the table the sensitivity of these films is compared with a corresponding Kodak film. The sensitivities are compared at 400 m μ for the non-sensitized film and at maximum sensitivity for the remaining film. Spectral sensitivity curves are also given for I-740 (I-740), I-810 (I-810), VI-900 (I-900), VI-1050-1 (I-1050-1) and VI-1050-11 (I-1050-11) films. The sensitivity of I-1050-1 and I-1050-11 can be significantly increased by the method of hypersensitization described by S.M.Solov'yev (Fotografirovaniye v infrakrasnykh luchakh - Photography in infrared rays - Izd. "Iskusstvo", M., 1957). An infrachromatic film A-850 is also manufactured which is sensitive up to about 900 m μ . The density of background fogging for all these films does not exceed 0.3. The films should be stored at 2 to 4°C since storage of films for use in the visible region causes an increase in fogging and in the case of infrachromatic films there is a decrease in sensitivity. The gamma of the described films lies in the range 2.0 to 3.0. There are 3 figures and 1 table.

SUBMITTED: May 17, 1962

Card 2/0 2

SILETSKIY, K.N.

Evaporation from the surface of Lake Kuchuk in the dry summer
of 1963. Izv. Alt. otd. Geog. ob-vya SSSR no.5:74-79 '65.
(MIRA 18:12)

1. Noveosibirskiy pedagogicheskiy institut.

SILETSKIY V.S.

SILETSKIY S.

Book:—1535. Yukalovich, M. P., Kirillin, V. A., Remisov, S. A., Siletskiy, V. S. and Timofeev, V. N. Thermodynamic properties of gases, Moscow, Mashgiz, 1953, 376 pp.; Rev. no. 15B, Ref. Zb. J. Mechan. 1956.

In the first part of the book, "The theory and method of determining the thermodynamic values of gas," basic information is given of the thermodynamics of ideal gases, making use of quantum analysis and the theory of spectra. The calculation method used by the authors is examined according to the spectrograms of the thermodynamic properties of a gas which has been reduced to an ideal state. The influence of the pressure on thermodynamic parameters is examined, and a method is indicated for correction of pressure if necessary. In the second part, "Tables of the thermodynamic values of mono-, di-, tri- and polyatomic gases and combustion gas mixtures and their combustion products," tables are given for the heat capacity and the entropy of the gases N₂, O₂, C₂O₂, N₂O, of atmospheric nitrogen, of air, H₂, CO, NO, OH, CO₂, N₂O, SO₂, H₂S, CS₂, COS, H₂O hydrocarbons of the methane series C_nH_{2n+2}, of the ethylene series C_nH_{2n} of the acetylene series C_nH_{2n-2}, hydrocarbons of the diolefine series, ethyl alcohol, benzene, the hydrocarbon series of styrol and methystyrol, the cyclopentane series, the cyclohexane series, the combustion gases, the products of combustion, the products of complete and incomplete combustion of petrol. Tables are also given of the viscosity and thermal conductivity of various gases, and, in a supplement, the basic spectroscopic constants of gases. In all, the book contains 341 tables and 17 graphs.

V. A. Prokof'ev, USSR

Courtesy of Referativnyi Zhurnal

Translation, courtesy Ministry of Supply, England

YASTRZHEBSKIY, Andrey Stanislavovich; SILETSKIY, V.S., red.; VORONIN,
K.P., tekhn.red.

[Basic trends in the development of textbooks on engineering
thermodynamics] Osnovnye napravleniya razvitiia uchebnikov po
tekhnicheskoi termodinamike. Moskva, Gos. energ. izd-vo, 1958.
216 p. (MIRA 12:1)

(Thermodynamics)

NELIDOV, Igor' Yevgen'yevich; SILENTSKII, V.S., kand.tekhn.nauk, dotsent,
red.; VORONIN, K.P., tekhn.red.

[Economics and organization of power machinery manufacturing]
Ekonomika i organizatsiia energomashinostroeniia. Moskva, Gos.
energ. izd-vo, 1958. 391 p. (MIRA 12:1)
(Turbines) (Boilers)

AUTHOR:
TITLE:

PERIODICAL:
ABSTRACT:

Siletskiy V.S., Cand.Tech.Sci.
Concerning calorific values of steam in the ideal gas condition
(K voprosu o kaloricheskikh velichinakh vodyanogo para v ideal'no
gazovom sostoyanii)

Teploenergetika 1958,

No.7, pp. 18-21 (USSR)

The article gives a general review of the application of methods based on quantum mechanics and spectroscopy to determination of the properties of steam, commencing with the work of Gordon in 1937. Various corrections that have been made to Gordon's figures over the years are described, and corrections to values of specific heat to the corresponding formula. Temperature corrections are given in Table.1. new values are up to 1% higher than Gordon's, particularly at high temperatures. An interpolation formula is quoted, which was used by Vukalovich in drawing up all steam tables after 1946. Reference is then made to recent American results obtained from approximate equations by means of a computer. Spectroscopic constants used by Fridman and Haar, J.Chem.Phys. 1954, are given in Table.4; values of specific heat, enthalpy, free energy and entropy obtained by these

steam in
the physical

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SOV/96-58-7-5/22

Concerning calorific values of steam in the ideal gas condition. authors are reproduced in Table.5 - these are still the most accurate and reliable values. The calorific values for steam given in Vukalovich's steam tables, which are probably the best available, were calculated by means of an equation suggested by the author of this article and are compared with values of Fridman and Haar in Tables. 6., 7. and 8. Specific heat values are 0.5% higher than those of Fridman and Haar, which is rather a lot. The differences are smaller in the cases of enthalpy and entropy; for the one they are within the limits of experimental error and for the other they do not exceed 0.03%. Therefore, the author's formula can be used to calculate values of enthalpy and entropy given in the steam tables up to 1200°K, even making allowance for the most recent data for the calorific values of steam in the ideal gas condition. At present, the Chair of Theoretical Fundamentals of Thermotechnics of the Moscow Power Institute is calculating calorific values of steam in the ideal gas condition, using the latest data on the physical

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Concerning calorific values of steam in the ideal gas condition. SOV/96-58-7-5/22
and spectroscopic constants of the H₂O molecule. When these calculations are complete, recommendations can be made about values for future use. There are 8 tables and 14 literature references (3 Soviet and 11 English)

ASSOCIATION: Vsesoyuznyy Zaochnyy Energeticheskiy Institut (All-Union Correspondence Institute of Power Engineering)

1. Steam - Properties 2. Steam - Tables 3. Quantum mechanics - Applications 4. Spectroscopy - Applications

Card 3/3

GOLOVINTSOV, Andrey Grigor'yevich, doktor tekhn. nauk, prof.; YUDAYEV,
Boris Nikolayevich, kand. tekhn. nauk; KALABIN, V.P., doktor tekhn.
nauk, prof., rezensent; SILETSKIY, V.S., kand. tekhn. nauk, red.;
SAVEL'YEV, Ye.Ya., red. izd-va; TIKHANOV, A.Ya., tekhn. red.

[Engineering thermodynamics] Tekhnicheskaya termodinamika. Moskva,
Mashgiz, 1961. 311 p. (Thermodynamics) (MIRA 14:12)

CHIRKIN, Viktor Sergeyevich; SILETSKIY, V.S., kand. tekhn. nauk,
retsenzent; BYSTRITSKAYA, V.V., inzh., red.; GORDEYEVA, L.P.,
tekhn. red.

[Heat conductivity of engineering materials] Teploprovodnost'
promyshlenniykh materialov. Izd.2., perer. i dop. Moskva,
Mashgiz, 1962. 245 p. (MIRA 16:2)
(Materials--Thermal properties)

VUKALOVICH, Mikhail Petrovich; NOVIKOV, Ivan Ivanovich; KALAFATI,
D.D., dots., kand. tekhn.nauk, retsenzent; SILETSKIY, V.S.,
red.; BORUNOV, N.I., tekhn. red.

[Technical thermodynamics] Tekhnicheskaya termodinamika. Izd. 3
perer. i dop. Pod red. M.P.Vukalovicha. Moskva, Gosenergoizdat,
1962. 304 p. (MIRA 15:7)

(Thermodynamics)

CHERNOV, Aleksandr Vasil'yevich; BESSREBRENNIKOV, Nikolay
Konstantinovich; SILETSKIY, V.S., prof., retsenzent;
GRASSE, B.S., retsenzent; REMIZOV, S.A., red.

[Fundamentals of heat engineering and hydraulics] Osnovy
teplotekhniki i gidravliki. Moskva, Energiia, 1965. 455 p.
(MIRA 18:9)

SILEVA, M. N.

"The Physiology and Biochemistry of the Adaptation of Winter Wheat to Frost." Cand Biol Sci, Moscow Acad of Agriculture imeni K. A. Timiryazev, Moscow, 1953. (RZhBiol, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

GUNAR, I. I.; SILEVA, M. N.

Sugar changes in winter wheat during the process of hardening.
Fiziol.rast. 1 no.2:141-145 N-D '54. (MLRA 8:10)

1. Kafedra fiziologii rasteniy Moskovskoy sel'skokhozyaystvennoy
akademii imeni K.A.Timiryazeva
(Wheat) (Plants--Metabolism)

SILEVA, M.N.

"Use of wild fruit, berry, and nut plants." V.A.Turkin. Reviewed
by M.N.Sileva. Vop.pit. 1⁴ no.2;60 Mr-Ap '55. (MLRA 8:6)
(FRUIT CULTURE)
(NUT TREES)

SILEVA, M.N.

Colorimetric method of determining photosynthesis and respiration in plants.
Biul.Glav.bot.sada no.20:101-106 '55. (MIRA 8:9)

1. Glavnny botanicheskiy sad Akademii nauk SSSR.
(Photosynthesis) (Plants--Respiration)

SILEVA, M.N.

USSR/ Biology - Book review

Card 1/1 Pub. 86 - 37/38

Authors : Sileva, M. N., Cand. Biol. Sc.

Title : Making use of wild berry and nut bearing vegetation

Periodical : Priroda 44/7, 125 - 126, Jul 1955

Abstract : A review is made of the book, "Making Use of Wild Berry and Nut Bearing Vegetation," by V. A. Turkin, published by the State Publishing Office for Agricultural Literature, in 1954, and containing 440 pages. The book points out the nourishing properties of wild fruits and nuts and shows that their vitamin content (for which figures are given) is often higher than that of domesticated plants. The book is given a high rating.

Institution :

Submitted :

TSITSIN, N.V., akademik; ZAGORODNYY, L.S.; SILEVA, M.N.

Greening seed potatoes before winter storage. Priroda 49
no.5:94-95 My '60. (MIRA 13:5)

1. Glavnnyy botanicheskiy sad AN SSSR, Moskva.
(Seed potatoes)

TSITSIN, N.V.; SILEVA, M.N.

Chemical composition of seeds in the Siberian pea tree. Biul.
Glav. bot. sada no.46:53-55 '62. (MIRA 16:5)

1. Glavnnyy botanicheskiy sad AN SSSR.
(Pea tree) (Seeds)

SILEVA, M.N.

Chemical composition of the prickly pear. Biul.Clav.bot.sada
no. 48:99-100 '63. (MIRA 17:5)

1. Glavnnyy botanicheskiy sad AN SSSR.

BUCHAREST, ROM.

Computation of hydrocyclones with regard to the installations for the separation of sand from the kaolin suspension used in paper manufacture.
p. 1%

CEILUMUS SRL (Cercetări Stiințifice și Inginerilor
din Cerclele și Ministerul Industriei Petrolului și Chimie)
Bucuresti, Romania
Tel. ..., te. 6, 3 no 112

Montly List of Eastern European Accession Index (PEI) Ed. vol. 4, No. 11
November 1986
vol.

SILHA, J.

A diesel motor unit as a stand-by source of power. Energetika
Cz 7 no.2:84-91 F '57.

STIHA, J.

A diesel motor unit as a stand-by source of power. p.64.
(Energetika, Vol. 7, No. 2, Feb. 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

JIIHA, J.

problems connected with the building of temporary 22/0.4 kv. transformer stations.

p. 9. (E. EROGETIKA) (Praha, Czechoslovakia) Vol. 8, no. 1, Jan. 1958

30: Monthly Index of East European Accession (EEAI) IC Vol. 7, No. 5, May 1958

SILKA, J.

Sources of electric power for temporary consumption. p. 351.

ŠKALICKA. (Ministerstvo energetiky a Československá vedecká technická
společnost pro energetiku při Československé akademii věd) Praha, Československo.
Vol. 9, no. 7, July 1959.

Monthly list of East European Acquisitions (EEA) LC, vol. 9, no. 1, Jan. 1960.

Uncl.

SILHA, J.

TECHNOLOGY

Periodicals: ELEKTROTECHNIK Vol. 14, no. 3, Mar. 1959

SILHA, J. Portable plug-type power distributor. p. 81.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 5,
May 1959, Unclass.

SILHA, J.

Construction of the hydroelectric power station in Arlik from the point of view
of electrical engineering. p. 306.

ELEKTROTECHNIK. (Ministerstvo tezkeho strojirenstvi) Praha, Czechoslovakia.
Vol. 14, no. 10, Oct. 1959.

Monthly list of East European Accessions (EEAI) LC, vol. 9, no. 1, Jan. 1960.

Uncl.

SILHA, Jaroslav, inz.

Suitable lighting on the worksites is a condition for introduction of the second and third shift. Inz stavby 9 no.9:324-327 S '61.

1. Vyzkumny ustav stavebni výroby, Praha.

SILHA, Jaroslav, inz.

New trends in crane driving systems. Inz stavby 10 no. 2:Suppl. 19-22.
F. '62.

1. Vyzkumny ustav stavebni výroby, Praha.

SILHA, Jaroslav, inz.

Remote control of building machines. Inz stavby 10
no.4: Suppl.37-39. Ap '62.

1. Vyzkumny ustav stavebni výroby, Praha.

SILHA, Jaroslav, inz.

Control of revolutions in asynchronous motor drives. Elektrotechnik
17 no.7:191-195 Jl '62.

1. Vyzkumny ustav stavebni výroby, Praha.

SILHA, Jaroslav, inz.

Taleoperator, a unit for remote control of cranes, made in Czechoslovakia.
Inz stavby 10 no.10: Suppl: Mechanizace no.10:113-115 '62.

1. Vyzkumný ustav stavební výroby, Praha.

SILHA, J., inz.

"Automation of concrete and mortar--mixing plants" by Girska, Lapir
and Susnikov. Reviewed by J. Silha. Ins stavby 10 no.10:399 0 '62.

SILHA, J., inv.; LHM, **, **

Remote control unit. Autostartaca 6 no.12:313-314 D '63.

SILHA, Jaroslav, inz.

Diesel-electric drives of automatic and mobile cranes.
Inz stavby 12 no. 2: Supplement: Mechanizace no. 2:
20-25 '64.

1. Vyzkumny ustav pozemnich staveb, Praha.

, 1987, Kordalav, Iran.

"Tirpi T-1500A, has economic offerings. It's the basis of
tower cranes. Its stability is well-supplied. Mechanization no. 15 - 164.

Prague, Czechoslovakia, Inz.

problems of automation in the building industry. Inz stavby 12 no.5:
Mechanization no.5:71-75 My '64.

Research Institute of Building Construction, Prague.

L 21153-66 ECP(c)/ECP(v)/T/EPT(k)/EPT(h)/EPT(l)
ACC NR: AP6010957

SOURCE CODE: CZ/0080/65/000/004/0094/0094

AUTHOR: Silha, J. (Engineer; Prague) 32

ORG: none

TITLE: Problems of automation of mobile machines 11

SOURCE: Automatizace, no. 4, 1965, 94

TOPIC TAGS: automation, machine industry

ABSTRACT: The article presents a brief and general outline of the problems which arise in the automation of mobile machines. It is said that automation of such equipment is far ahead of that in Czechoslovakia and that it is necessary to speed up the application of automation. [JPRS]

SUB CODE: 13, 05 / SUBM DATE: none

Card 1/1

UDC: 338.2

CZECHOSLOVAKIA/Human and Animal Physiology - The Effect of
Physical Factors. Ionizing Radiation.

T

Abs Jour : Ref Zhur Biol., No 3, 1959, 13371
Author : Silha, Milan
Inst :
Title : Coagulation of Homogenized Cytoplasm as a Reaction to
Radiation
Orig Pub : Ceskosl. biol., 1958, 7, No 1, 60-61

Abstract : Homogenized cytoplasm of the spleen and liver, separated
from the nuclei by centrifugation, coagulated
after several hours of incubation in vitro, if it
was taken from rats which had been radiated with 25 r
for 30 minutes before sacrifice. A homogenate, derived
from non-radiated rats at the same time interval
and prepared in the same manner, did not coagulate.

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- 145 -

SILHA,M.

Injury of cell cytoplasm by radiations. Cesk. fysiol. 9 no.4:
380-381 Jl '60.

1. Biofysikalni ustav CEA V, Brno.
(PROTOPLASM radiation eff.)
(RADIATION INJURY exper.)

SILHA, M.

Postirradiation changes in microsomal lipoprotein. Folia Biol.
8 no.2:128-130 '62.

1. Institute of Biophysics, Czechoslovak Academy of Sciences, Brno.
(NEOPLASM metab) (LIPOPROTEINS metab)
(RADIATION INJURY exper)

SILHA, M.

Isolation of deoxyribonucleoprotein from liver in an alkaline medium. Folia biol. (Praha) 11 no.2:109-112 '65

1. Institute of Biophysics, Czechoslovak Academy of Sciences, Brno.

SIIHAN, A., inz.; HRUDKA, Z., promovany fyzik

Modeling freight transportation operations on automatic
computers. Doprava no. 2:140-143 '64.

SILHAN, Antonin

Automatic data processing organization of the French railroad administration. Doprava no.2:148-153 '63.

SILHAN, F.

Classification and use of oil burners. Ropa a uhlie 6
no.5:147-151 My '64.

1. Research Institute, Kralovopolske strojirny, Brno.

SEDLACEK, V., Dr.; SILHAN, J., MUC.; KOVARIK, J., MUC.

Use of morphine during pathologically prolonged labor. Cesk.
gyn. 22[36] no.4:304-309 May 57.

1. I. por. a gyn. klinika MU v Brne, prednosta prof. Dr. Ludvik
Havlasek.

(MORPHINE, anesth. & analgesia
in prolonged labor (Cz))

(LABOR, anesth. & analgesia
morphine in prolonged labor (Cz))

SILHAN, V.

"Servomotors with printed winding."

Automatisace. Praha, Czechoslovakia. Vol. 2, no. 3, Mar. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclass

SILHAN, V.

"Problems of centralized assembly operations of electric-power equipment in
Czechoslovakia,"

ENERGETIKA, Praha, Czechoslovakia, Vol. 9, no. 5, May 1959

Monthly List of East European Accessions Index (EEAI), Library of Congress,
Vol. 8, no. 8, August 1959

Unclassified

SILHAN, Vladko

Cooperation in the pool of six air lines. Letecky obzor 5 no.1:25
'61.

SILHAN, Vladko

Agencies of the Czechoslovak Air Lines abroad. Letecky obzor
6 no.9:278-280 '62.

CHIANG, J.

The improved LRD-4,5-disc cultivator. p. 269.

(Ministerstvo semedelstvi) Praha. [^{Publication on mechanization of agriculture}
issued by the Ministry of Agriculture. Semi-monthly]

Vol. 5, no. 14, July 1955

SOURCE: East European Accessions List (EEAL) Library of Congress.
Vol. 5, No. 1, January 1956

16.8000(1121,1132,1344)

S/103/61/022/009/012/014
D206/D304

AUTHORS: Matyáš, J., and Šilhánek, J. (Pardubice, ČSR)

TITLE: Determining multi-dimensional linear system transfer functions from the statistical characteristics of the quantities at the system input and output

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 9, 1961,
1248 - 1252

TEXT: In the present article the authors suggest a method of determining the transfer functions of dynamic control systems from the knowledge of statistical properties of junctions at their inputs and outputs. If the system to be analyzed is not exactly linear or if its behavior cannot be defined in a simple manner, the described method permits finding a linear approximation to such a system. Systems having n inputs and m outputs are said to be multi-dimensional. It is assumed that stationary random processes (a random vector) $v = (v_1, v_2, \dots, v_n)$ act at the inputs. If there are within

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the system certain uncorrelated to the input noise sources, then the output random vector $u(u_1, u_2, \dots, u_m)$ can be expressed by

$$u = x + y = [x_1 + y_1, x_2 + y_2, \dots, x_m + y_m], \quad (1)$$

in which x - are components of the output with no noise present and y - the components due to internal noise. Such a system may be represented by an equivalent bloc diagram of Fig. 2. The problem becomes: 1) To determine the matrix of transfer functions y of the analyzed system C from the given spectral matrices S, H, G; 2) To decide whether or not internal noise sources exist in system C; 3) If $y \neq 0$, to determine the matrix of spectral densities of the vector and design the shaping filters for the generation of random vector y . Since vectors v and y are uncorrelated, the matrix H

$$H = [H_{ik}] \quad (i = 1, 2, \dots, n; k = 1, 2, \dots, m) \quad (4)$$

is also the matrix of mutual spectral densities of random vectors v and x . If random quantities τ_i are uncorrelated between themselves

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ves, the matrix S is a diagonal matrix and hence the transfer functions y_{1k} are simply determined by

$$y_{1k} = \frac{B_{1k}}{S_{11}}. \quad (7)$$

In a general case, the matrix

$$SY = B \quad (6)$$

represents m systems of linear algebraic equations with the general matrix of the system S and mx unknowns y_{1j} . System (6) has a unique solution only when its determinant is not zero. Since the matrix S is Hermitian, the condition of a unique solution is

$$\det(S) > 0. \quad (8)$$

It is assumed further that condition (8) is satisfied and that there exists therefore an inverse matrix S^{-1} giving the solution of the matrix Eq. (6) in the form of

$$y = S^{-1} B \quad (9)$$

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Determining multi-dimensional

which is the basic matrix relationship for further analysis. The matrix S may be represented as a product by

$$S = B \cdot B^T \quad (10)$$

when B - a triangular matrix. The elements B_{ik} of matrix B are, with the exclusion of phasing filters, the transfer functions of a system of shaping filters for the generation of random processes having the matrix of spectral densities S. The matrix B^T is the transposed matrix with conjugate elements with respect to B. It follows that the matrix equation (6) can be replaced by an equivalent set of equations

$$B^T Y + H = BY + X. \quad (11)$$

Since B and therefore B^T are triangular matrices the solution of Eq. (11) does not present any difficulties. From the 1st equation the subsidiary matrix Y is determined and from the 2nd equation the required matrix of transfer functions y of system C is then found. Since the above measurements and calculations cannot be made abso-

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lutely accurate, the limiting conditions imposed on the system can-not in practice be fulfilled and the solution y will actually re-present a certain approximation of mathematical representation of the described system. If internal noise source exists within the system C it is necessary to evaluate the matrix of spectral densi-ties of the random vector y the components y_i of which corrépond the noise at the output. It has been assumed that random vectors v and y are uncorrelated, i.e. the matrix of mutual correlation func-tions is zero

$$M\{v(t)' y(t + \tau)\} = 0 \quad (14)$$

where M means mathematical expectation. It is easy to prove that the matrix

$$M\{x(t)' y(t + \tau)\} = 0 \quad (15)$$

will also be zero, i.e. that random vectors x and y are also uncor-related. There are 3 figures and 7 Soviet-bloc references.

SUBMITTED: January 10, 1961

Card 5/6

CZECHOSLOVAKIA

CZ/0009/66/000/009/0528/0532

AUTHOR: ZMirovsky, Miroslav; Silhanek, Jaroslav

ORG: Department of Organic Technology, VSCHT, Prague (Katedra organicke technologie, VSCHT)

TITLE: Preparation of bis-trichlormethyltrisulfide (BTT) fungicide by catalytic reaction of hydrogen sulfides with trichlormetansulphenylchloride

SOURCE: Chemicky prumysl, no. 9, 1966, 528-532

TOPIC TAGS: fungicide, grain fungicide, fungicide research, fungicide production

ABSTRACT: Research is now being done in Czechoslovakia on broader use of BTT fungicide. Findings on certain conditions for the preparation of BTT are reported. The catalytic effects of compounds of thirty metals (from groups IV, V, and VI of the periodic table) on the reaction of hydrogen monosulfide with trichlormethanesulphenylchloride were studied. In every case the reaction was faster and proceeded with greater selectivity in the presence of the catalyst (arsenic, antimony, molybdenum, tungsten, zinc). The greatest yield of BTT (above 90%

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ACC N: 140001490

SOURCE CODE: CZ/0009/66/000/000/0028/0.32

AUTHOR: Zbroovsky, Miroslav; Silhanek, Jaroslav

ORG: Department of Organic Technology, VSCHT, Prague (Katedra organické
technologie, VSCHT)

TITLE: Preparation of bis-trichlormethyltrisulfide (BTT) fungicide by catalytic
reaction of hydrogen sulfides with trichlormetansulphenylchloride .

SOURCE: Chemicky prumysl, no. 9, 1966, 528-532

TOPIC TAGS: fungicide, grain fungicide, fungicide research, fungicide production

ABSTRACT: Research is now being done in Czechoslovakia on broader use of BTT
fungicide. Findings on certain conditions for the preparation of BTT are reported.
The catalytic effects of compounds of thirty metals (from groups IV, V, and
VI of the periodic table) on the reaction of hydrogen monosulfide with trichlormeth-
anesulphenylchloride were studied. In every case the reaction was faster and
proceeded with greater selectivity in the presence of the catalyst (arsenic,
antimony, molybdenum, tungsten, zinc). The greatest yield of BTT (above 90%

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ACC NR: AP6031499

of the theoretical) was achieved when diethylether was used as reagent, while the fastest reaction occurred with alcohol. With methanol, ethanol, and butanol, the yield was 80—85% of the theoretical. Orig. art. has: 3 figures, 3 tables, and 7 formulas. [KS]

SUB CODE: 06 / SUBM DATE: 15Mar66/ORIG REF: 013/OTH REF: 002/

Ccc: 2/2

SILBAEK, Karel, inz.

Use of waste heat from ceramic furnaces. Sklar a keramik
14 no. 3: 91-92 Mr '64.

1. Development worksite of the Karlovarsky porcelan,
Brezova.

WENDLER, Ljubos, inz.; BARES, Miloslav; SILHANEK, Karel

Morphology of apparent defects of porcelain glazes. Sklar a
keramik 15 no.3:78-80 Mr '65.

Causes of the formation of shell-like structure and rasters
on glazes. Ibid.:81-83

1. Research Worksite of the Karlovarsky porcelain National
Enterprise, Brezova u Karlovych Varu.

SILHANEK, V.

Contemporary problems of take off and landing. p. 408.

(Kridla Vlasti. No. 13, June 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 10, October 1957. Unclassified.

SILHANEK, V.

A vertical start and landing. (To be contd.)

P. 500, (Kridla Vlasti) No. 16, Aug. 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Acquisitions (EEAI) Vol. 6, No. 11 November 1957

S/103/60/021/05/12/013
B007/B011

AUTHOR: Silhanek, Ya. (Pardubice, Czechoslovakia)

TITLE: Simulation of a Linear System With n Steady Random
Processes¹⁶ at the Input Without the Use of Random
Action Generators

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 5,
pp. 652 - 654

TEXT: The paper of Ref. 2 had offered, for a linear system with n steady random processes at the input, a method of determining a mean square output quantity with the aid of a simulator which does not require the use of a white noise generator. This method is based on the possibility of producing a random process of known spectral density at the input with the aid of a white noise generator and a linear shaping filter (the determination of the transmission function of the latter had been described in Refs. 1, 2). Formula 2 is given, and the block diagram following therefrom is shown in Fig. 2. In this case, not a white noise, but a single pulse function (Dirac function) is fed to the input of the

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Simulation of a Linear System with n Steady
Random Processes at the Input Without the
Use of Random Action Generators

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shaping filter. On a rise of t , the quantity of the integrator at the output tends to the value y^2 . $y(t)$ is the output quantity of the linear system investigated. The advantage of this method is the elimination of the white noise generator. It is generalized here for a linear system S_n with n steady random processes at the inputs of the system. The solution of the problem posed is given, and it is shown that each value y_i^2 (see formula (6)) can be determined by the method described in Ref. 2. It is further shown that the mean value of the square y^2 of the output quantity of the linear system S_n with n steady random processes at the inputs can be obtained at the output of the block diagram shown in Fig. 3. This block diagram serving for the calculation on a simulator consists, apart from the given linear system, of shaping filters, a quadrator, and an integrator. Not the white noise, but individual pulse functions are fed to the inputs of the shaping filters. The mean

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Simulation of a Linear System With n Steady
Random Processes at the Input Without the
Use of Random Action Generators

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values of the square y^2 are obtained at the integrator output. There
are 3 figures and 2 Soviet references.

SUBMITTED: January 12, 1960

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Card 3/3

SILHANKOVA, L

✓ 1100. Selective inhibition of rough forms of yeast. L. Silhánková
Cz. mikrobiol., 1956, 1, 204-210 (Vysoká škola chemicko-technologická, Biologická katedra, Prague, Czechoslovakia). — Na cholate in culture which only slowed down the rate of growth of smooth forms, completely inhibited rough forms cultured on malt or malt extract agar under aerobic and anaerobic conditions. It appeared fungicidal. Transitional forms in the presence of Na cholate produced small shining transparent colonies. On subculturing these without cholate, rough forms were formed. Smooth colonies isolated from cultures dissociated by means of cholate were stable.

A. ACKROYD

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Mel

SILJANKOVA, L.

Effect of surface-active agents on rough and smooth forms of yeasts.

P. 193, (Ceskoslovenska Mikrobiologie) Vol.2, no.4, July 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

Poland/Microbiology. Technical Microbiology

F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57610

Author : Silhankova Ludmila

Inst : Not given

Title : Progress of Technical Microbiology in Czechoslovakia

Orig Pub : Prezem. spozywczy, 1957, 11, No 5, 237-239

Abstract : No abstract

Card 1/1

SILHANKOVA, Ludmila.

The mechanism of action of dimethyllaurylbenzylammonium chloride
(Ajatin) on rough and smooth forms of yeast cells. Folia microbiol
5 no.3:157-164 '60. (EEAI 9:10)

1. Chair of biology, College of Chemical Technology, Prague.

(AJATIN)

(YEAST)

(CELLS)

(DIMETHYLDODECYLBENZYLAMMONIUM CHLORIDE)

SILHANOVA, L.

Investigation of the mechanism of the action of dimethyllaurylbenzyl-ammonium chloride (ajatin) on rough and smooth forms of yeast cells.
II. Synergic action of ajatin and iodoacetic acid on various substrates. Folia microbiol 5 no.4:237-246 '60. (EEAI 9:10)

1. Chair of Biology, College of Chemical Technology, Prague.
(AJATIN) (YEAST) (CELLS) (IDOACETIC ACID)
(DIMETHYLDODECYLBENZYLAMMONIUM CHLORIDE)

SILHANKOVA, Ludmila

A new method of quantitative determination of contamination of baker's yeast by wild yeasts or by dissociation forms of the production culture.
Folia microbiol. 7 no.4:255-256 '62.

1. Department of Biological Sciences, Institute of Chemical Technology
Prague 6.
(YEASTS)

SILHANKOVA, Ludmila

The effect of iodacetate on the dehydrogenation activity of smooth and rough forms of yeasts in the presence of ethanol or acetate. Folia microbiol. 8 no.1: 32-41 '63.

1. Department of Biology, College of Chemical Technology, Prague 6.
(YEASTS) (IODOACETATES) (DEHYDROGENASES)
(ALCOHOL, ETHYL) (ACETATES)

SILHANKOVA, Ludmila

A new method for quantitative determination of members of the genus
Saccharomyces in mixtures with other yeast genera. Folia microbiol.
8 no.2:102-108 '63.

1. Department of Biological Sciences, College of Chemical Technology,
Prague 6.

(YEASTS) (PHENYLHYDRAZINE) (CANDADA) (AZIDES)
(FLUORIDES) (QUINOLINES) (FERMENTATION) (MALTPOSE) (GLUCOSE)

SILHANS, J., et al.

Uptake and binding of ferric ions in S and R-forms of yeasts.
Folia microbiol. (Praga) 10 no.4:251-254 Jl'65.

1. Department of Biology, College of Chemical Technology,
Prague.

C Z E C H

The Tanaseev method in the assay of gold and platinum alloys. V. Šilhárová and J. Kváček (Výzkumná lab. průmyslového sloužby, Prague). *Chem. Listy* **49**, 266-8 (1955).—A soln. obtained by the Tanaseev method (cf. *C.A.* **43**, 8955) is tested for Au by means of a filter paper impregnated with benzidine (blue color; Ir interferes), or by Fe salts (black spot). In the presence of Pd, Au is detected by means of dimethylglyoxime and by reduction with SnCl₂. Pt is detected by the reaction with TlNO₃. To detect Pd, the sample is dropped on a filter paper soaked with Tl⁺ and Au³⁺, and a dark-brown color is developed. It changes the yellow color produced by treatment of NH₄Cl soln. with Pt⁴⁺ to orange. Rh forms a cherry-red color on reduction with SnCl₂ in the presence of satd. solns. of NH₄Cl and KI. Au, Pt, and Pd must be removed with dimethylglyoxime prior to these tests. M. Hudlický

SILHARD, Vladimir, inz. (Zagreb)

More productive prefabricated parts, mechanization, tools, and
hygienic and technical protection. Gradevinar 16 no. 8:261-272
Ag '64.

ABRAHAM, A.; SILHAVA, M.

Temperature dependence of optical transmissivity of melted quartz
in ultraviolet spectrum. Silikaty 7 no.3:231-233 '63.

1. Ustav fysiky pevných látok, Československá akademie věd, Praha.

SILHavy, F.

SILHavy, F. Where potentials in our repair shops are. p. 3⁴.

Vol. 7, no. 2, Jan. 1957
MACHA ISACE ZEMEDELSTVI
AGRICULTURE
Czechoslovakia

Se: East European Accession, Vol. 6, No. 5, May 1957

1957, 1.

optical film mount. p. (2) of cover (Mechanické Československé
vol. 7, no. 7, Ser. 1957 Praha)

SA: Monthly List of East European Accession (EAA) 10, Vol. 7, no. 7, July 1957. Uncl.

SILHavy, Jaroslav

Evaluation of the National Conference on the Complex Soil Research
in the Czechoslovak Socialist Republic. Vestnik CSAZV 8 no.6:363-366
'61.

(EEAI 10:9)

1. Namestek ministra zemedelstvi, lesniho a vodniho hospodarstvi.
(Soil research)

SILHavy, Jan, inz.

New elements in the design of a heating and power plant for
chemical factories. Energetika Cz 11 no.12:609-611 D
'61.

SILHavy, P.

A lignite-burning power plant. p. 1.
(Czechoslovak Heavy Industry, No. 11, 1956. Prague, Czechoslovakia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 6,
June 1957. Uncl.

1. L. M., ROMA, ITALY

2. L. M., ROMA, ITALY. ~~Opposition~~. (1. type.) prints, book. ~~Lesbian~~ ~~various~~ ~~publications, 1950-1957.~~ (Futura, etc., etc.) (Calibrated, letter and Persian summaries. 1st ed. 1950, 2nd. plates, will., fototypes, facsim., tables)

3. L. M., ROMA, ITALY

4. L. M., ROMA, ITALY

S : East European Accension, Vol. 1, No. 5, May 1957

KERTEKOVA, Zd., student; SILIANOVA, B., student; OSMANLIYVA, R., student;
DASKALOVA, E., student.

Distribution of tuberculosis among students of the I.P. Pavlov
Medical Academy in Plovdiv. Suvrem. med., Sofia 5 no.12:25-30
1954.

1. Iz kruzhoka po ftiziologija (rukovoditel: D. Dimitrov) i
Klinikata po ftiziatrija pri Meditsinskata akademija I.P. Pavlov
(direktor: prof. As. Shopov)
(TUBERCULOSIS, epidemiology,
in Bulgaria, in med. students)
(SCHOOLS, MEDICAL,
tuberc. in med. students in Bulgaria)

SILIANU, E., conf. ing.; ALEXANDRU, P., ing.

On the assembling conditions of the planetary mechanisms with
double satellites. Constr mas 15 no.5:388-391 My '63.

1. Institutul politehnic, Brasov. 2. Sef lab. Institutul
politehnic, Brasov (for Alexandru).

SILIC, Tomislav

Systems of reactive power meters. Elektroprivreda 15 no.9/10:456-
462 S-0 '62.

1. ZEPH, BiH, Sarajevo.

BOBROKOV, B.P.; MORDKOVICH, M.S.; SILICH, A.A.; TAVSIKOVA, I.M.

Use of pectolytic fermentation preparations in the production of
apple juice. Trudy MNIIIPP 3:67-73 '63.

(MIRA 18:1)

SILICH, A.L., inzh.

Construction projects of the cellulose and paper industry.
Mont. i spets. rab. v stroi. 23 no.4:8-9 Ap '61. (MIRA 14:5)

1. Ministerstvo stroitel'stva RSFSR.
(Paper industry)
(Building)

MISHEYAKOV, Dmitriy Yakovlevich, prof., doktor tekhn. nauk;
ROSTOVTSEV Gennadiy Nikolayevich; NEUSTRUYEV, Aleksandr
Aleksandrovich; STARODUBOV, K.F., doktor tekhn. nauk,
prof. akademik, retsenzent; SOKOLOV, E.N., doktor tekhn.
nauk, prof., retsenzent; DOLZHENKOV, I.Ye., kand. tekhn.
nauk, dots., retsenzent; SHTEPENKO, V.Z., kand. tekhn.nauk,
dots., retsenzent; KRAVTSOV, A.F., kand. tekhn. nauk, dots.,
retsenzent; FIL'TSER, G.A., dots., retsenzent; SILICH, A.N.,
st. prepodav., retsenzent; SIUKHIN, A.F., ussistent,
retsenzent; SAVEL'YEV, L.P., assistant, retsenzent

[Equipment, mechanization and automation of heat-treating
plants] Oborudovanie, mekhanizatsiya i avtomatizatsiya v
termicheskikh tsekhakh. Moskva, Metallurgiia, 1964. 467 p.
(MIRA 17:10)

1. Akademiya nauk Ukr. SSR (for Starodubov).

KOZHEVNIKOV, S.N., prof.; KIRILYUK, V.D., inzh.; SILICH, A.N., inzh.

Investigation of rotary flying shears. Izv.vys.ucheb.zav.;
chern.met. 2 no.8:149-155 Ag '59. (MIRA 13:4)

1. Dnepropetrovskiy metallurgicheskiy institut. Rekomendovano
kafedroy avtomatisatsii metallurgicheskogo oborudovaniya
Dnepropetrovskogo metallurgicheskogo instituta. 2. Chlen-
korrespondent AN USSR (for Kozhevnikov).

(Rolling mills--Equipment and supplies)
(Shears (Machine tools))

SILICH, A.N.

Kinematics of shears for hot cutting. Izv. vys. ucheb. zav.;
chern. met. 5 no.5:182-192 '62. (MIRA 15:6)
(Shears (Machine tools))

SILICH, A.N.

Dynamics of hot cutting shears. Izv. vys. ucheb. zav.; chern.
met. 5 no.7:129-136 '62. (MIRA 15:8)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Shears (Machine tools))

SILICH, M. I. Cand. Chem. Sci.

Dissertation: "Selective Oxidation of Carbon Monoxide in the Presence of Hydrogen." Sci Res Order of the Labor Red Banner Physicochemical Inst imeni L. Ya. Karpov, 27 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

SIL10H M. I.

Kinetics of the simultaneous oxidation of carbon monoxide and hydrogen on manganese dioxide. M. I. Silich and B. P. Minns (Inst. Nitrogen Ind., Moscow). Zhur. Fiz. Khim. 24, 1170-87 (1950). A method was developed to study the simultaneous oxidation of CO and H₂ on solid catalysts. The oxidation of CO, both in the presence and in the absence of H₂, is a 1st-order reaction with respect to CO and a zero-order reaction with respect to O₂. The activation energy for this reaction in the absence of H₂ = 7500 cal/mole, and in the presence of H₂ = 7000 cal/mole. The oxidation of H₂, in the presence or absence of CO, is a 1st-order reaction with respect to H₂ and zero-order with respect to O₂. The activation energy for this reaction remains the same in the presence or in the absence of CO.

RE
NWS

SILICH, M.I., kandidat khimicheskikh nauk.

Production of aldehydes and alcohols by the *exo* synthesis method.
Khim. nauka i prom. 2 no.1:59-64 '57. (MLR 10:4)
(Alcohols) (Aldehydes) (Chemistry, Organic--Synthesis)

AUTHORS: Silich, M.I., Sidorov, I.P., Martynova, L.L.,
Bukarov, A.R., Yulsov, A.A. and Kisil', I.M.

TITLE: Improved Process for Obtaining Alcohols by the
Oxo-synthesis Method With Suspended Catalyst

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961,
No. 8, pp. 19 - 24

TEXT: The authors mention briefly the drawbacks of the
existing technological schemes for obtaining alcohols by
oxo-synthesis. The main drawbacks of the scheme with
suspended catalyst are the erosion of the throttle elements,
the need for paste pumps for transporting the scheme with
suspension in the liquid and the liquid streams, a complicated
filtering section in the liquid and liquid streams, a complicated
control and the decomposition of the cobalt carbonyls (decobal-
tisation) are the chief drawbacks of the other two schemes.
The present paper deals with improving the scheme with sus-
pended catalyst. In the present process the synthesis occurs
in a pilot plant. The tests were carried out on a model and
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Improved Process

in the liquid phase and therefore a solvent is used which is isobutyl alcohol at the start of the reaction, changing to the final product as the reaction proceeds. In the laboratory tests a propane-propylene feedstock with 74 to 85% propylene was used, the ratio of raw material to solvent being nearly 1:2 and that of CO to hydrogen 1:1.2. In the pilot plant, synthesis gas was used as feed, with the ratio of hydrogen to carbon monoxide varying between 0.5:1 to 7.5:1, the other parameters being nearly the same as those in the laboratory tests. In order to eliminate the deficiency in the filter system, a re-cycle system using a centrifugal separator was introduced. This system (developed in conjunction with NIIKhIMMASH under the direction of Senior Engineer G.K.Ivanova) enables the filters to work for long periods without cleansing and, by returning the catalyst-rich fraction to the reactor, diminishes the quantity of product going for decobaltisation, filtering, hydrogenation and rectification. Thus, the process of obtaining butyl alcohols is carried out in three stages: 1) production of cobalt carbonyls and hydroformylation of propylene; 2) decomposition of cobalt carbonyls

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E030/E335

Improved Process

(decobaltization) and 3) hydrogenation of aldehydes and alcohols. In the previous two-stage process only alcohols were obtained as the final product; in the present three-stage one aldehydes also are obtained. It has been shown that by hydroformylation at 300 atm. and 125 °C the content of n-aldehydes in the final product increases. It has also been found that at temperatures of 110 to 140 °C and pressures of 25 to 100 atm the catalyst decomposes completely. At 135 °C and 300 atm. propylene converts to n-aldehydes (63%), iso-aldehydes (21%), high aldehydes (11.4%) and by-products (4.6%), the ratio of n- to iso-aldehydes being 3:1. With decreasing pressures this ratio decreases, being 2.2:1 at 250 atm. and 1.6:1 at 200 atm. During the oxo-reaction carried out in the pilot plant at temperatures between 135 and 160 °C, a pressure of synthesis gas of 180-200 atm., content of catalyst of 1-2% and contact time 45 min., a product with a ratio of n- to iso-aldehydes of approximately 2:1 was obtained. This product hydrogenated in a mixture of butyl alcohols in the same ratio. G.N. Klinova, A.D. Yerofeyeva, N.M. Malygina, A.I. Khokhlov, A.I. Zavtseva, T.V. Yelisova and A.I. Busygina
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